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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/605,146	09/11/2003	Edward W. Lee	ML-14	2145
23933	7590	03/04/2004	EXAMINER	
STUART T AUVINEN 429 26TH AVENUE SANTA CRUZ, CA 95062-5319			GILMAN, ALEXANDER	
			ART UNIT	PAPER NUMBER
			2833	

DATE MAILED: 03/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

K.D

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/605,146	LEE ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Alexander D Gilman	2833	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 September 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>12/29/2003</u> . | 6) <input type="checkbox"/> Other: _____  |

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## DETAILED ACTION

### *Drawings*

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the plurality of additional contacts comprising I/O pins for extended –USB or PCI Express or mini PCI Express operations must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 5-9, 11-14, 17, 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Yen.

With regard to claim 1, Yen (Patent Publication US 2003/0100203) discloses (Fig. 8) a slim Universal-serial-Bus (USB) connector (p. 3, section 0036) comprising:

a connector substrate;

a plurality of metal contacts disposed on a contact surface of the

connector substrate,

the metal contacts (111) for carrying USB signals;

locking depressions (112a) formed below the connector substrate on a second surface opposite to the contact surface;

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wherein the locking depressions are for receiving metal springs from a female USB connector when the slim USB connector is inserted into the female USB connector (p. 3, lines 1-3 in column 1); and end rails (112), substantially parallel to the metal contacts, along side edges of the connector substrate, the side edges being smaller in area than the contact surface and the second surface of the connector substrate and disposed between the contact surface and the second surface; wherein the end rails are for sliding in gaps between sides of a female connector substrate of the female USB connector and a metal case surrounding the female connector substrate when the slim USB connector is inserted into the female USB connector (p. 3, lines 1-3 in column 1);.

With regard to claim 2, Yen (Patent Publication US 2003/0100203) discloses a width of the slim USB connector is wider than a substrate within a standard male USB connector, (inherently, the width of Yen's connector should substantially equal to the internal width of the metal casing of the standard female USB connector, for example, Fig. 4 of the application, to prevent the male connector's horizontal linear or angular displacements which can break the connection) but a height of the slim USB connector is less than a height of a metal case surrounding a standard male USB connector, wherein the female USB connector is a standard female USB connector or a slim female USB connector having a reduced height compared with the standard female USB connector.

With regard to claim 5, Yen discloses the connector substrate is an extension portion of the circuit substrate.

With regard to claims 6, 7 Yen discloses (Fig. 7) a flash memory chip (503) mounted on the circuit substrate for reading data from and for writing data to the flash memory chip and sending the data over the metal contacts as USB signals to the female USB connector.

With regard to claim 8, Yen discloses (Fig. 11) a plastic case that at least partially surrounds the circuit substrate and covers the flash memory chip and the controller chip.

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With regard to claim 9 Yen discloses (Fig. 13) the locking depressions (112a) are formed from a lower portion of the plastic case that at least partially covers the second surface of the connector substrate; wherein the end rails (Fig. 12) are formed from an upper portion of the plastic case that at least partially covers the contact surface of the connector substrate.

With regard to claim 11, Yen discloses (Fig. 2) a Universal-serial-Bus (USB) connector assembly comprising:

a connector assembly body (100) without a surrounding metal case for insertion into a female USB connector; end rails (102) on side edges of the connector assembly body, the end rails causing the connector assembly body to have an enlarged width that is greater than a standard width of a standard connector substrate on a standard USB male connector when a metal case surrounding the standard connector substrate is removed; metal contacts (101) disposed along one or more upper surfaces between the side edges for making electrical contact with the female USB connector; and engaging depressions (102a) , on a bottom surface opposite the one or more upper surfaces, for engaging metal springs on the female USB connector, whereby the engaging depressions and end rails provide a secure fit into the female USB connector when the connector assembly body is inserted without a surrounding metal case.

With regard to claim 12, Yen discloses (Fig. 2) tabs protruding from a back surface of the connector assembly body, the tabs for making permanent electrical contact to a circuit board (201); embedded metal extensions of the metal contacts, the embedded metal extensions embedded within the connector assembly body and for connecting the metal contacts to the tabs through the connector assembly body.

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With regard to claim 13, Yen discloses (Fig. 2) depressions engage metal springs on a first portion of the female USB (not shown) in Yen but shown in Fig. 1 of the Application) connector but do not engage metal springs on a second portion of the female USB connector, whereby some metal springs on the female USB connector are engaged but other metal springs are not engaged.

With regard to claim 14, Yen discloses a height of the connector assembly body is less than a standard height of the standard USB male connector having the metal case surrounding the standard connector substrate, whereby the USB connector assembly has a reduced height (see title of Yen's Publication).

With regard to claim 17, Yen discloses metal rail contactors.

With regard to claim 18, Yen discloses the tabs are soldered to a circuit board (201) that has a flash memory chip and a controller chip mounted thereon (Fig. 3).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, 4, 10, 15, 16, 19, 20, 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yen in view of Amoni et al..

With regard to claims 3, 4, 10, 15, 16, 19, 20, and 21, Yen discloses all of the limitations as applied to claims 1, 11 above except for a plurality of plastic dividers, each divider disposed between an adjacent pair of the metal contacts, the plurality of dividers rising above the contact surface of the connector substrate.

Amoni et al (US 6,334,793) disclose (Fig. 7) a plurality of plastic dividers rising above the contact surface of the connector substrate.

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Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide Yen with a plurality of plastic dividers rising above the contact surface of the connector substrate as taught by Amoni et al et al , to provide minimum tolerance distance between communicating surfaces of the male and female components of full width of the male connector.

With regard to claims 22-27, Yen inherently discloses wherein the metal contactor means comprising four USB contacts and a plurality of additional contacts comprising I/O pins for extended –USB or PCI Express or mini PCI Express operations, since the Yen's connector is only connector for connecting memory card (which can be of different) and structurally is capable to incorporate a variety of contacts.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander D Gilman whose telephone number is 571 272-2004. The examiner can normally be reached on Monday-Friday, 10:30 a.m. - 8:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula A. Bradley can be reached on 571 272-2800 ext. 33. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

02/06/2004



**ALEXANDER GILMAN  
PRIMARY EXAMINER**